

# WEATHER COMPENSATION KIT:



## NBE Part number:

3/4" kit            570001-1  
1" kit              570001-2

The actual values used in the weather compensation are shown below in the right side and show:

**Middle temperature outside:** Actual middle temperature out and (actual temperature out in parenthesis), meaning not middle.

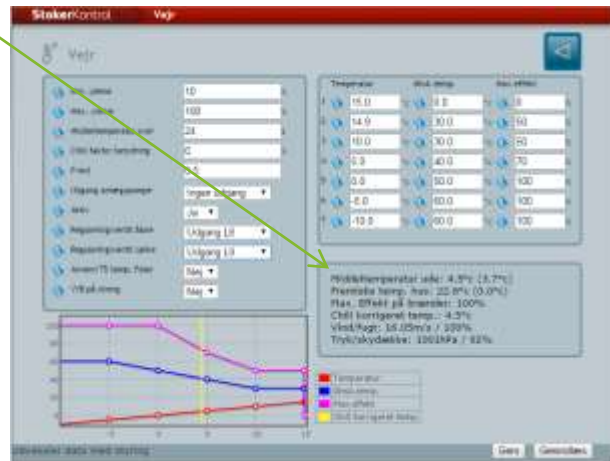
**Flow temperature house:** Actual flow temperature and (actual setpoint in parenthesis).

**Max. Effect on burner:** The actual maximum operating power where the burner can go up to.

**Chill corrected temperature:** Actual chill corrected middle temperature out, meaning the temperature that is actual used for controlling.

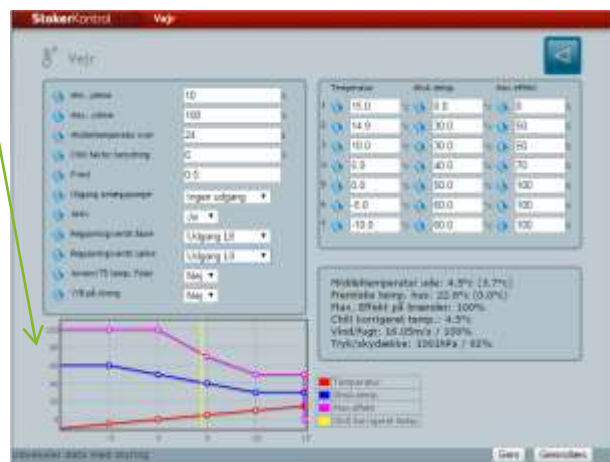
**Wind / humidity:** Actual wind speed and relative humidity from the internet, used as chill factor.

**Pressure/cloudiness:** Actual pressure and cloudiness, from the internet.



## What do I see on the graphics?

The temperatures installed as "Temperature" (Temperature out) create points on a graphic and will be shown with a red line. The belonging "Wanted temperature" (Flow temperature) create equivalent points in the graphics and will be shown with a blue line. The belonging "Max. power" (Max. operating power) create equivalent points in the graphics and will be shown with a purple line. The yellow vertical line show the actual temperature out (corrected with chill factor) so that the actual wanted flow temperature and max. operation power in the graphics can be shown.



# WEATHER COMPENSATION KIT:

Weather compensation is a method to adjust the flow temperature to the actual needs from the outside or inside temperature.

The idea is that the colder it is outside, the warmer the flow for heating the house needs to be, or vice versa, the hotter it is outside, the "cooler" can the flow be. It is not only the outside temperature that determines the need, but the wind's cooling effect (chill factor) also has a great significance

## **Boiler temperature.**

In theory you could just lower the boiler temperature by how hot it is outside, but it poses a risk of condensation in the boiler. The trick is to keep a high temperature of the boiler itself, but lowering the temperature of the flow.

If you have your boiler standing in an outhouse etc. with a shorter or longer pipe run between the boiler and the house, then there is definitely something to improve.

## **Maksimum power.**

Another "feature" of weather compensating is that you can limit the maximum operating power compared to the outside temperature. In the controller there is a weather compensation, which can handle both requirements, regulation of the flow temperature and limitation of the maximum operating power.

## **Wanted temperature**

In the weather compensation you specify the desired temperature on the flow you want at a certain outdoor / indoor temperature and the amount of operating power you want at the same outdoor / indoor temperature.

The parameters are named: - "Temperature" for outdoor temperature.

- "Wanted temperature" for the wanted flow temperature.

- "Max. Power" for the maximum power operation.

There is a total of 7 sets of temperatures, which together gives the possibility of a six shared curve.

Additionally, there are parameters for how long should the outside temperature

Average should be calculated over, to smooth out sudden temperature swings, as well as a factor in the impact that the wind must have on the temperature and the speed control loop to respond.

Average calculation for the outside temperature is adjusted with "Middle temperature over" and indicated in hours.

## **Chill factor.**

The factor for wind's impact is adjusted with "Chill factor significance" and expressed in %. The regulations' reaction is adjusted with the "P-regulation". In addition to these parameters, it is possible to determine whether the weather compensation must be enabled or not, the parameter is called "active" and can be set to "Yes" or "No".

It is possible to set an exit to the pump (extra pump) located in the mixing circuit parameter called "Output system pump".

There can also be specified outputs for motorized valve in the mixing circuit, to respectively open and close the valve.

These outputs are called "Regulation valve open" and "Regulation Valve close".

## **Outdoor temperature.**

You can also decide whether the outside temperature should come from the Internet or using a local sensor mounted on the T5.

## **DHW before or after the mixing loop.**

You can specify whether the DHW sits before or after the mixing loop.

If one has a mixing circuit mounted, it is important to know about the DHW is mounted before or after the mixing circuit, when, in cases where it is mounted by the mixing circuit is heated by the water are regulated in the temperature down. In this case, you specify "DHW of string" to "Yes", causing the engine valve in the mixing circuit opens 100% when the DHW is heated, and therefore will not run with reduced flow temperature during this time.

It is not necessary to have a mixing circuit with additional circulation pump and mixer to enjoy the weather compensation, because you can just use it without some outputs set and then regulate the maximum operating power so you do not get too excessive heating when not needed.

If the max. effect is set to 0, the boiler will stop when the in/outdoor temperature reaches this limit.



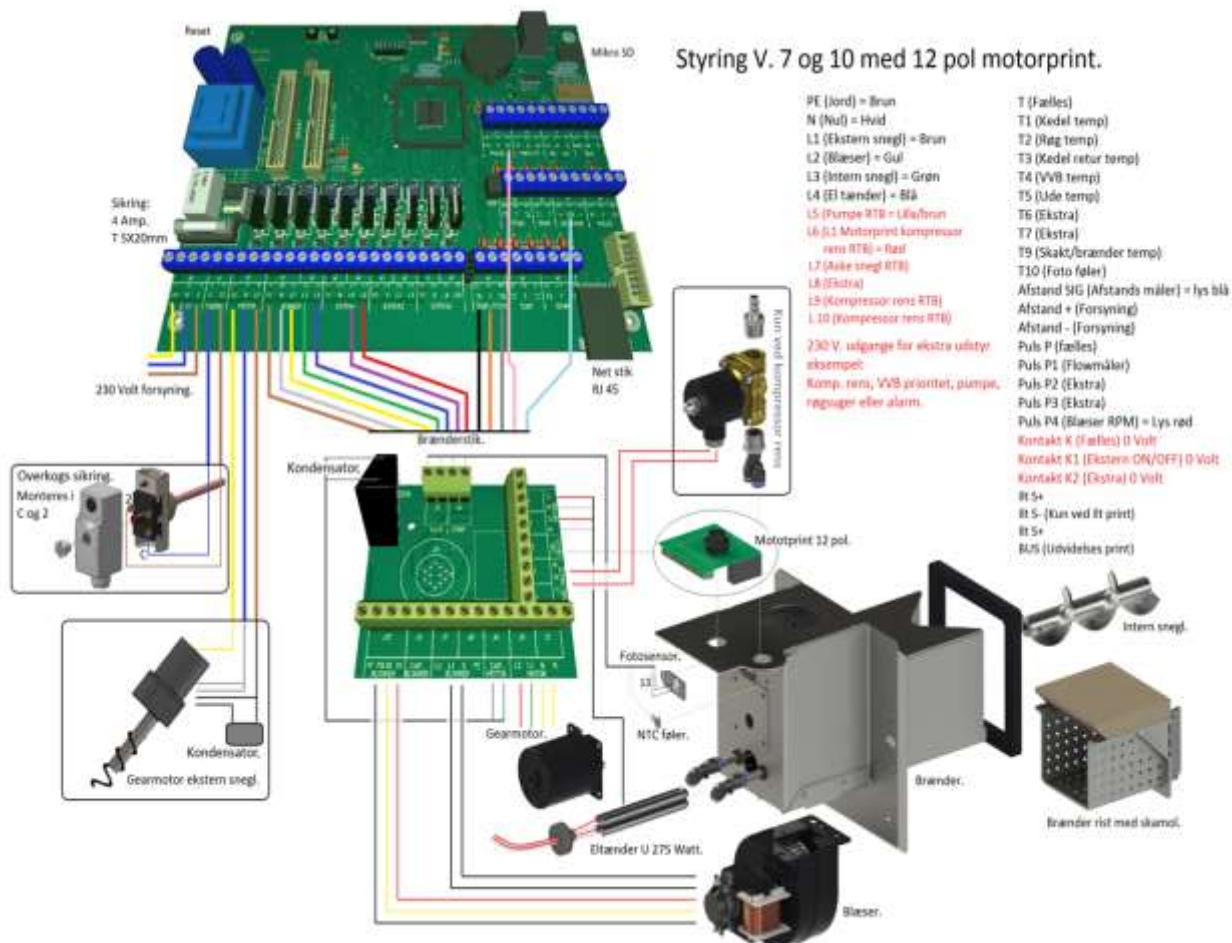
# WEATHER COMPENSATION KIT:

Montering V7 & V10

## Connection 230 Volt AC

- N
- OFF: L5-L10, ( L11-L20\* )
- ON: L5-L10, ( L11-L20\* )
- Jord. ( Ground )

L11-L20 are only available if fitted with extension print for control



# WEATHER COMPENSATION KIT:



## Connection Temperature Sensor

Outdoor / indoor temperature sensor	T	Flow temperatur sensor	T
Outdoor / indoor temperature sensor	T5	Flow temperature sensor	T6

T5 kan undværes, hvis styringen er online og får vejrdata fra nærmeste vejr station.

